Florida Contractors: Unlock Faster Projects with This BIM Implementation Guide

A step-by-step framework for **advancing from LOD 300 to LOD 500** — built for Florida general contractors, BIM coordinators, and project managers navigating Florida Building Code compliance requirements.

LOD 300 → 500 | FLORIDA BUILDING CODE | FIELD-READY FRAMEWORK

What's Inside

Your Roadmap Through This Guide

This presentation walks Florida construction teams through every critical **phase of BIM maturity** — from coordinated design documentation at LOD 300 to fully verified as-built models at LOD 500. Each section includes actionable checkpoints tied to Florida Building Code requirements.

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Understanding LOD Levels

What LOD 300, 350, 400, and 500 mean in practice

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Standards, team roles, and BEP documentation

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Code-tied verification at each LOD transition

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LOD 500 Closeout & Handover

As-built verification, COBie data, and owner delivery

Chapter 1 — LOD Foundations

Understanding LOD: From Design Intent to As-Built Reality

Level of Development (LOD) defines not just how detailed a BIM model is — it defines **what you can rely on it for**. The AIA/BIMForum LOD Specification is the industry standard, and Florida contractors must apply it consistently to meet both contract obligations and Florida Building Code submittals.

LOD 300

Coordinated design intent. Elements are modeled with precise geometry, quantity, and location. Suitable for permit submission and FBC code review.

LOD 350

Coordination geometry added. Connections, interfaces, and supports between systems are modeled — essential for clash resolution before construction.

LOD 400

Fabrication-ready model. Detailed enough for shop drawings, prefabrication, and installation sequencing on the Florida job site.

LOD 500

Verified as-built. Field-verified dimensions, conditions, and installed data — handed over to the owner for FM and lifecycle use.

Chapter 2 — Pre-Implementation

Setting Up for Success Before Modeling Begins

The BIM Execution Plan (BEP)

Every Florida project advancing to LOD 400–500 requires a project-specific BIM Execution Plan. The BEP defines model ownership, deliverable schedules, software platforms, file naming conventions, and coordination meeting cadence. Without it, LOD transitions break down.

FBC Tie-In: The BEP should reference Florida Building Code Chapter 1 submittal requirements and identify which disciplines are responsible for permit-set models.

Pre-Implementation Checklist

- Define LOD responsibility matrix by discipline (**AIA G202**)
- Select a **Common Data Environment (CDE)** — Autodesk BIM 360, Procore, or equivalent
- Establish coordinate system tied to Florida State Plane Coordinates (East or West Zone)
- Confirm software interoperability (Revit, Navisworks, Civil 3D)
- Assign BIM Manager and field BIM Coordinator roles
- Align model phasing with **permitting milestones under FBC 2023**

Chapter 3 — LOD 300

LOD 300: Coordinated Design & Permit-Ready Modeling

At LOD 300, every building element is modeled with **specific geometry, size, shape, location, and orientation**. This is the threshold for permit submission under the Florida Building Code. Models must accurately represent systems as designed — not as approximated.

Architectural & Structural

Walls, floors, columns, beams, and openings modeled to exact dimensions. Structural connections noted but not fully detailed until LOD 350.

MEP Systems

HVAC ductwork, plumbing lines, and electrical conduit routed in 3D space. Size and routing confirmed for Florida Energy Code compliance (ASHRAE 90.1 / FECC).

FBC Compliance Checkpoint

Confirm model supports Florida Building Code permit set requirements: accessibility (FBC Chapter 11), fire-rated assemblies (FBC Chapter 7), and wind load documentation (ASCE 7 / FBC Chapter 16).

Chapter 4 — LOD 350

LOD 350: Multi-Trade Coordination & Clash Resolution

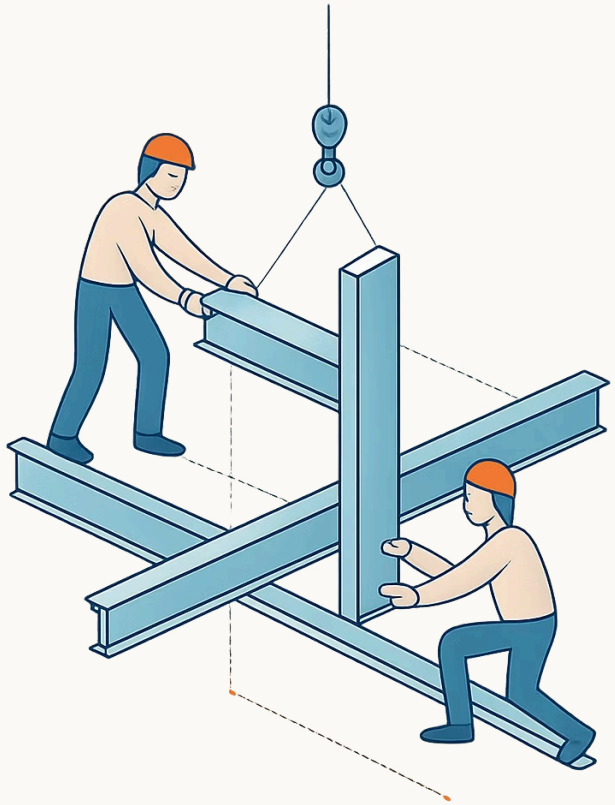
LOD 350 is where the model earns its value on Florida construction projects. **Coordination geometry is added for all interfaces — hangers, supports, clearances, and penetrations. This is the stage where clash detection becomes a contractual and safety obligation.**

Florida contractors should target **zero hard clashes** before issuing the construction document package. Soft clashes (clearance violations) must be resolved for HVAC service access and fire suppression system compliance under **NFPA 13 and FBC Chapter 9**. All clash reports should be archived in the CDE with disposition records.

Chapter 5 — LOD 400

LOD 400: Fabrication, Installation & Trade Coordination

LOD 400 takes the model from design intent to **fabrication-ready documentation**. Individual trade contractors — steel, mechanical, plumbing, electrical — produce shop drawing-level models used directly for prefabrication and installation sequencing. Florida's hurricane and flood exposure zones make LOD 400 particularly critical for structural steel connections and envelope penetrations.



Key LOD 400 Deliverables

- Structural steel connection models with anchor bolt patterns
- Prefabricated MEP rack and skid models
- Curtainwall and storefront system models (**FBC High-Velocity Hurricane Zone compliance**)
- 4D construction sequencing linked to project schedule
- QC verification against approved shop drawings

Florida-Specific Consideration

Navigating Florida's Unique Code Environment

Florida contractors face code requirements that go beyond standard IBC applications. The **Florida Building Code (FBC) 7th Edition** incorporates Florida-specific amendments that directly affect BIM model content and LOD verification checkpoints.

Wind & HVHZ

High-Velocity Hurricane Zone requirements in Miami-Dade and Broward mandate enhanced envelope modeling, impact-rated openings, and FBC Product Approval references embedded in model element data.

Flood Zone (FBC Chapter 12)

Model must reflect **FEMA flood zone designations**, finished floor elevations above BFE, and flood-resistant construction details — all verifiable in the LOD 400–500 model.

Energy Code (FECC)

Florida Energy Conservation Code compliance requires that mechanical and envelope elements carry performance data attributes — insulation R-values, glazing SHGC, and equipment efficiency ratings — from LOD 300 forward.

Accessibility (FBC Ch. 11)

Florida adopts the ADA Standards with modifications. ADA-compliant clearances, turning radii, and accessible route continuity must be validated in the coordinated LOD 350 model before permit submission.

Chapter 6 — LOD 500

LOD 500: Field-Verified As-Built & Owner Handover

What LOD 500 Actually Means

LOD 500 is not simply "updating the model after construction." It requires **field verification** — a qualified party must confirm that modeled elements match installed conditions in terms of size, shape, location, quantity, and orientation. This verification process should be documented and traceable.

On Florida projects, LOD 500 delivery is increasingly required for public sector owners, healthcare facilities, and higher education campuses as a condition of Certificate of Occupancy.

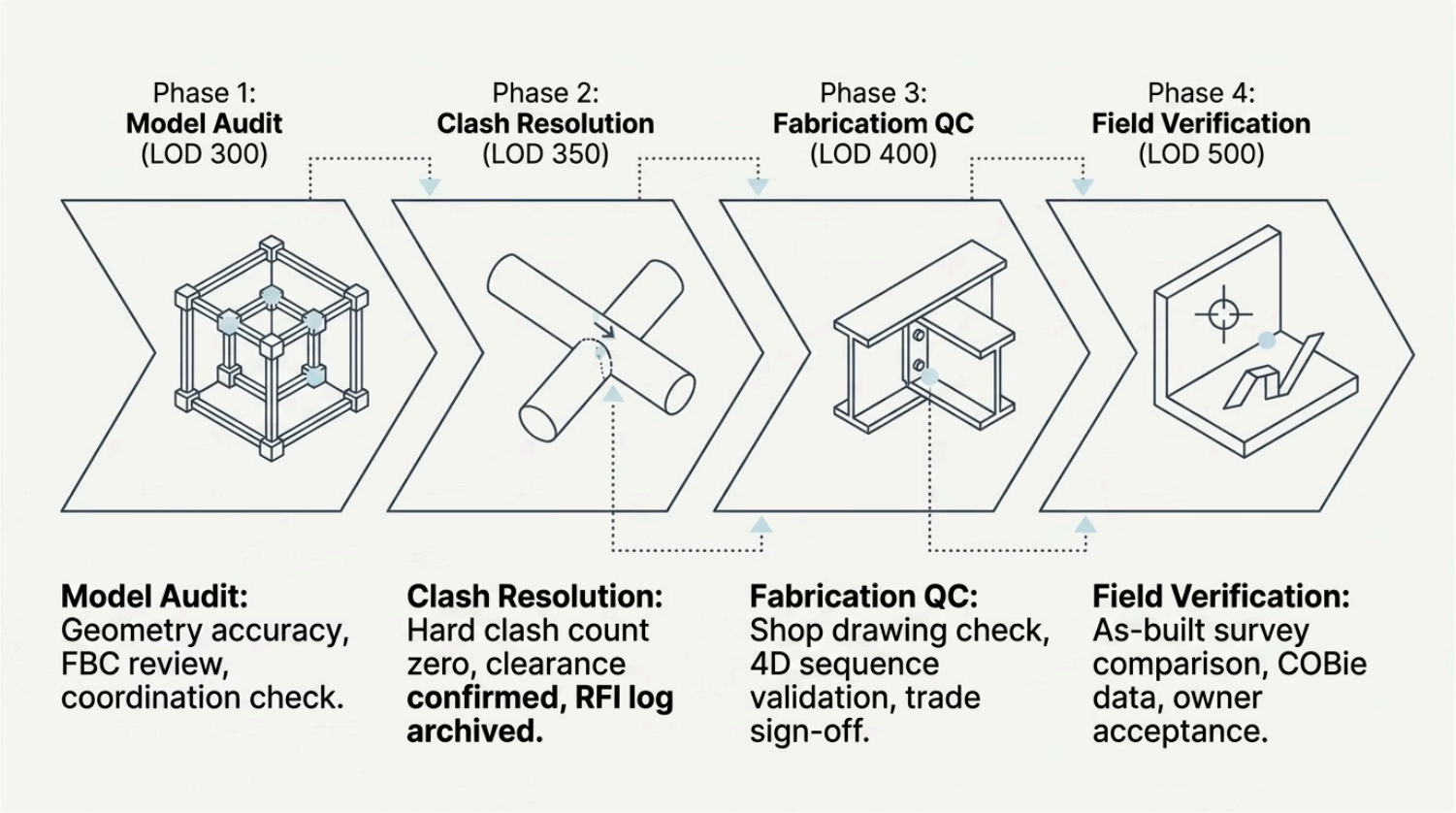
LOD 500 Deliverable Package

- Field-verified Revit/IFC model by discipline
- **COBie data export** (equipment, spaces, systems)
- Linked O&M manuals and warranty documentation
- Commissioning records attached to MEP model elements
- Final clash-free federated model archived in CDE
- GIS/survey tie-in for site and civil elements
- Florida-specific record drawings meeting AHJ requirements

Quality & Compliance

BIM Quality Control Across All LOD Phases

Quality control in BIM is not a one-time gate — it is a continuous process embedded at each LOD transition. Florida contractors should establish formal **Model Quality Checkpoints (MQCs)** at LOD 300, 350, 400, and 500 that are tied to contract milestones and permit submittals.



Each checkpoint should produce a **signed Model Certification** from the responsible discipline lead, confirming that the model meets the required LOD definition and applicable FBC provisions before the project advances to the next phase.

Implementation Metrics

Measuring BIM ROI on Florida Projects

Investing in BIM from LOD 300 t**o 500 delivers measurable returns —** particularly in Florida's complex regulatory and environmental context where rework, permitting delays, and hurricane-season schedule disruptions are real cost drivers.

40%

Clash-Related RFI Reduction

LOD 350 coordination consistently reduces field RFIs tied to MEP and structural conflicts on Florida commercial projects.

25%

Faster Permit Review

Code-compliant LOD 300 models submitted to Florida AHJs reduce back-and-forth review cycles and accelerate permit issuance.

3x

Prefab Efficiency Gain

LOD 400 fabrication models enable off-site prefabrication that compresses field installation time — critical for hurricane-window scheduling.

$0

Target As-Built Variance

LOD 500 field verification targets zero cost variance from undocumented field deviations during the owner FM transition period.

Common Pitfalls

What Florida BIM Implementations Get Wrong

1

Skipping the BEP

Starting modeling without a signed BIM Execution Plan leads to inconsistent LOD definitions, software conflicts, and disputed deliverables — especially when multiple trade partners are on-board.

2

Treating LOD 500 as a Cleanup Task

As-built verification cannot be retroactively bolted on at project close. Field scanning and verification workflows must begin at LOD 400 installation and continue through substantial completion.

3

Ignoring Florida-Specific Amendments

Using generic IBC-based model content checklists without cross-referencing the FBC 7th Edition amendments — particularly for HVHZ, flood, and energy requirements — creates costly permit resubmittal cycles.

4

No CDE Governance

Without a properly configured Common Data Environment with access controls, model versioning, and audit trails, project teams cannot confidently determine which model is current — a liability in litigation-prone Florida construction markets.

Call to Action

Ready to Advance Your BIM Maturity?

Florida's construction market is raising the bar. Owners, AHJs, and top-tier GCs are standardizing on LOD 400–500 delivery. Contractors who implement a structured, code-aligned BIM framework today will win more bids, reduce field costs, and deliver projects that perform — through permitting, construction, and into the owner's hands.

Start with Your BEP

Download the AIA G202 template and customize it for your next Florida project. Define LOD responsibilities by discipline before the first model element is placed.

Schedule a BIM Audit

Assess your current model workflows against the FBC compliance checkpoints in this guide. Identify the gaps between where you are and LOD 400/500 delivery.

Train Your Field Teams

LOD 500 verification requires field personnel who can use BIM tools on-site. Invest in tablet-based model access and **scan-to-BIM workflow** training for superintendents and BIM coordinators.

This framework aligns with the **FBC 7th Edition**, AIA BIMForum LOD Specification (2023), and Florida Department of Business and Professional Regulation (DBPR) digital submission requirements. Start building to the standard that Florida's best owners already expect.